

**Work Order ID 119417**

Thursday, May 15, 2014 4:01:37 PM

**\*119417\***

Page 1

Item ID: 647.9018

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Doubler

Start Date: 5/15/14

Start Qty: 4.00

**\*4\*** 30 44X  
**\*4\***

Cust Item ID:

Required Date: 5/15/14

Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan: MLJDate: 14-05-21

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

647.9000

A1

110

0.00

**\*110\***

Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: A1Prog Rev: A1

2-Deburr if necessary

0.00

FLOW CNC Waterjet

44 0

DAS  
23  
9-89

14-07-24

120

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*120\***

QC

Memo

0.00

Quality Control

44 0

DAS  
23  
9-89

14-07-24

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 119417

Thursday, May 15, 2014 4:01:37 PM

**\*119417\***

Page 2

Item ID: 647.9018 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Doubler  
Start Date: 5/15/14 Start Qty: 4.00 **\*4\*** Cust Item ID:  
Required Date: 5/15/14 Req'd Qty: 4.00 **\*4\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 <b>*130*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00				44			
140 <b>*140*</b> Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1  Memo Issue P/O to ATG : <u>25229</u> 1- Black Anodize as per Dwg 647.9000 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Comformity is required	0.00 0.00							
150 <b>*150*</b> Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs  Memo	0.00 0.00							

CZ 14/02/30 44  
44x SP14-8-19

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 119417

Thursday, May 15, 2014 4:01:37 PM

**\*119417\***

Page 3

Item ID: 647.9018 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Doubler  
 Start Date: 5/15/14 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 5/15/14 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC- Inspect part completeness to step on W/O	0.00				(6/4)		DAS 9 9-89	DAS 38 9-89 14/08/14
<b>*160*</b>	Memo	0.00							
QC									
Quality Control									
190	Identify as per dwg & Stock Location: <u>CC/K 114</u>	0.00						DAS 28 9-89	AUG 21 2014
<b>*190*</b>	Memo	0.00							
Packaging									
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
200	QC21- Final Inspection - Work Order Release	0.00							
<b>*200*</b>	Memo	0.00							
QC									
Quality Control									

MLJ 14-08-21  
 MLJ 14-08-21

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
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### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

Tuesday, June 10, 2014 10:34:35 AM

Page 1

Work Order ID: 119417

**\*119417\***

Parent Item: 647.9018

**\*647 9018\***

Parent Item Name: Doubler

Start Date: 6/12/14

Required Date: 6/20/14

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP REV: A 12.11.01 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.090		Purchased		No		110	sf	25.8000	0.067	3			

**\*M2024T3S 090\***

2024-T3 .090 sheet

**\*\***

mm 14/06/28

Location

Loc Qty

Loc Code

MAT022

25.8

123287

25.8

3.5

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
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Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

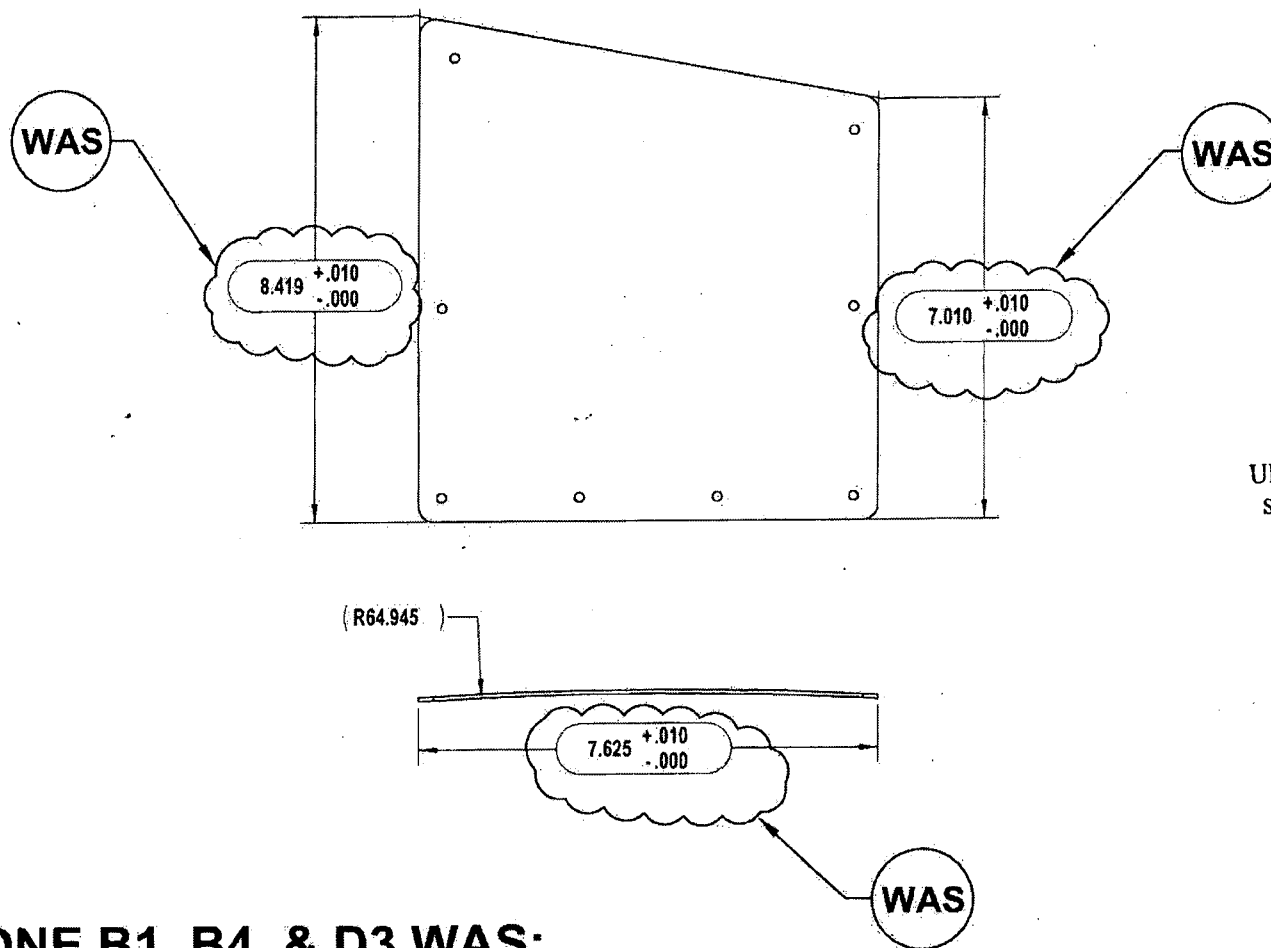
### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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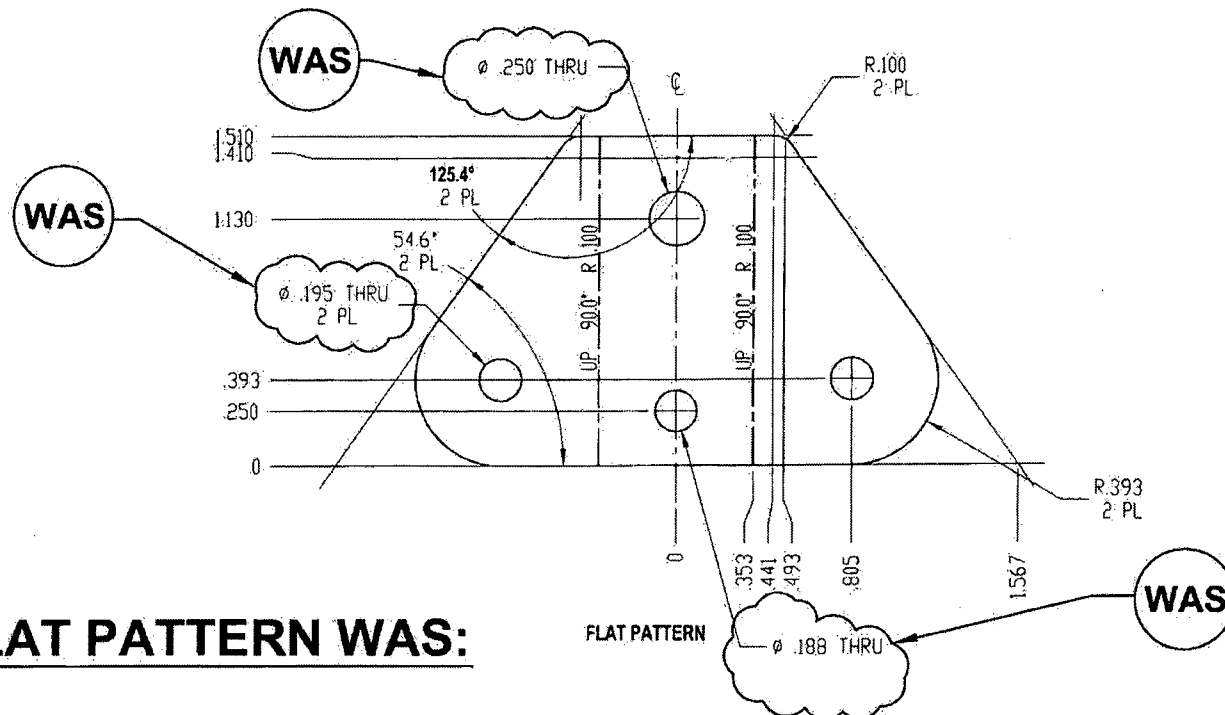
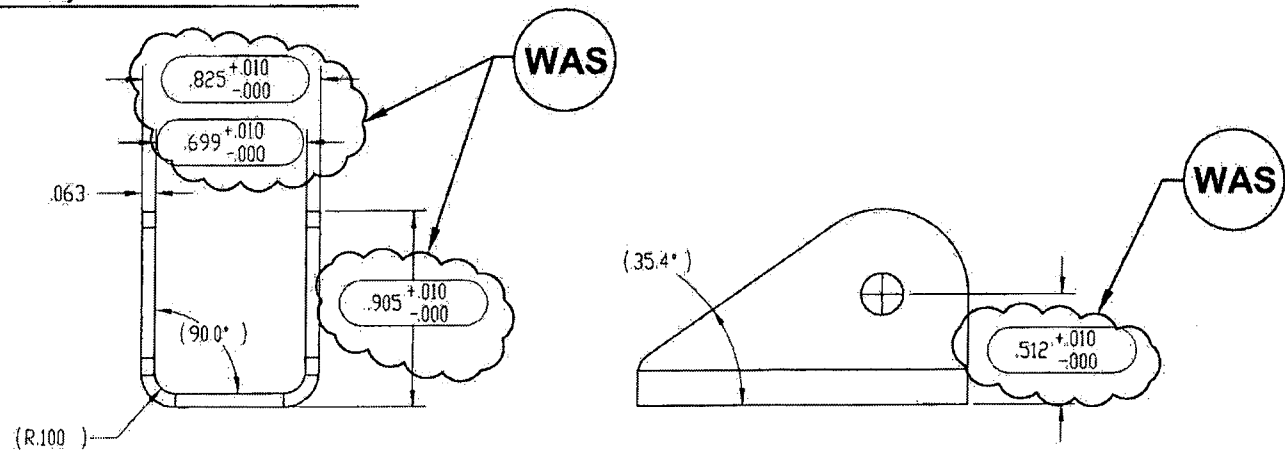
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03726				SHEET 1 OF 4	
	DWG NO. 647.9000	REV: N/C	PREPARED BY B. PETERS	DATE: 12/04/12	EFFECT ON DWG <input checked="" type="checkbox"/> INC. <input type="checkbox"/> UNINC.	
	DWG TITLE: SHEETMETAL					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: INCORPORATED ECN 03213, 03266, 03707 AND REVISED TOLERANCES.					ECR: D-12-013



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 119417 MWS  
14-05-21

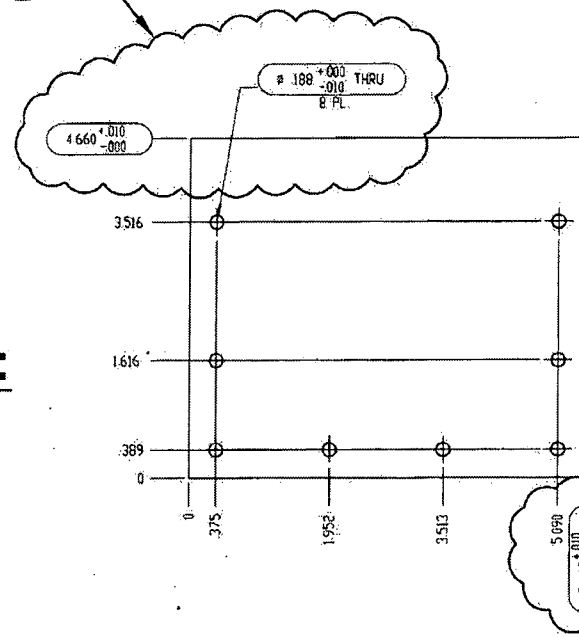
**SHEET 2, ZONE B1, B4, & D3 WAS:**

DOCUMENTS EFFECTED:	<input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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**SHEET 4, ZONE C2, D3, & D6 WAS:****SHEET 4, FLAT PATTERN WAS:**

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
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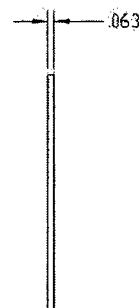
WAS



WAS

WAS

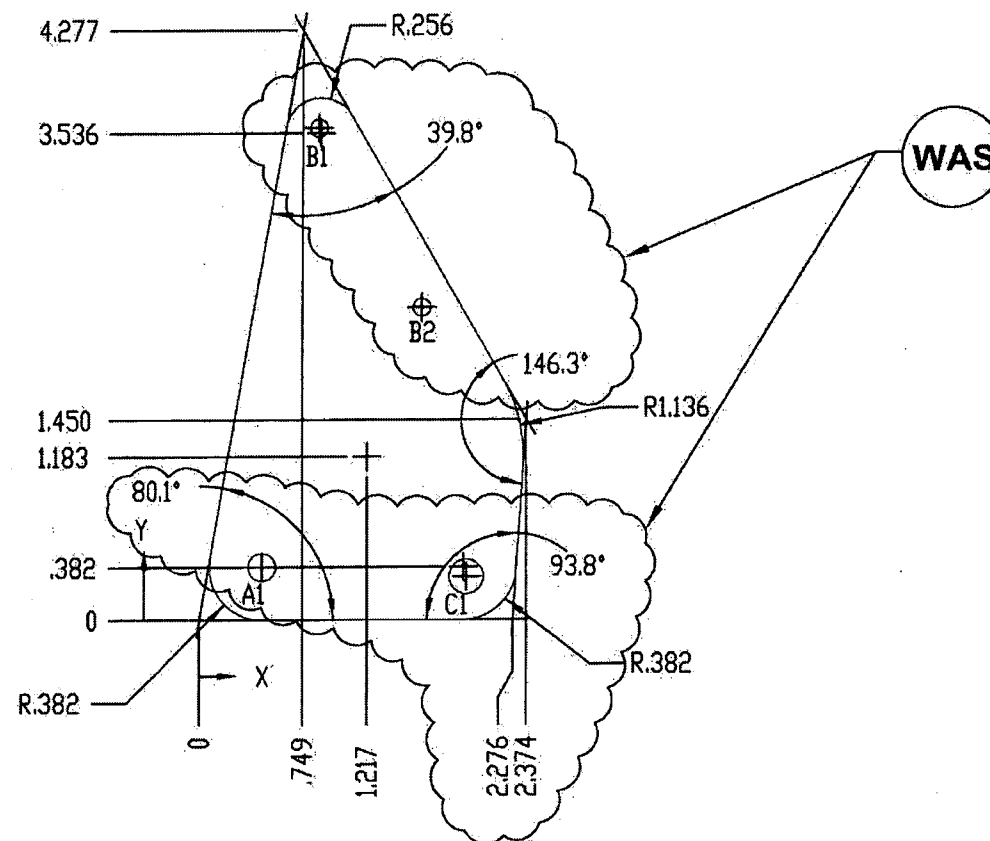
WAS



0.098 THRU  
✓ 0.148 X 100.  
4 PL

SHEET 5, WAS:SHEET 7, ZONE B5 & C7 WAS:


F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
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**SHEET 9, WAS:**

F./N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
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NOTES: UNLESS OTHERWISE SPECIFIED

-  MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;  
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N

- ### 3. DEBURR AND BREAK ALL SHARP EDGES

4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION 12PT. CENTURY GOTHIC.

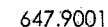
5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.

- 6 PART DIMENSIONS CONTROLLED BY CAD MODEL; FILE NAME: 647.9016 DOUBLER.SLDPRT-LAST MODIFIED 06-29-10

7. INSPECTION DIMENSIONS SHOWN WITH FINISH APPROX. 3-5 MIL MAX PER FACE.

- 8 MATERIAL: 304SS IAW AMS 5643

- 9 FINISH: PRIME IAW MIL-P-23377J, TYPE I, CLASS N

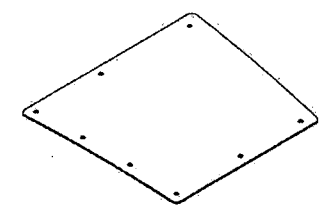
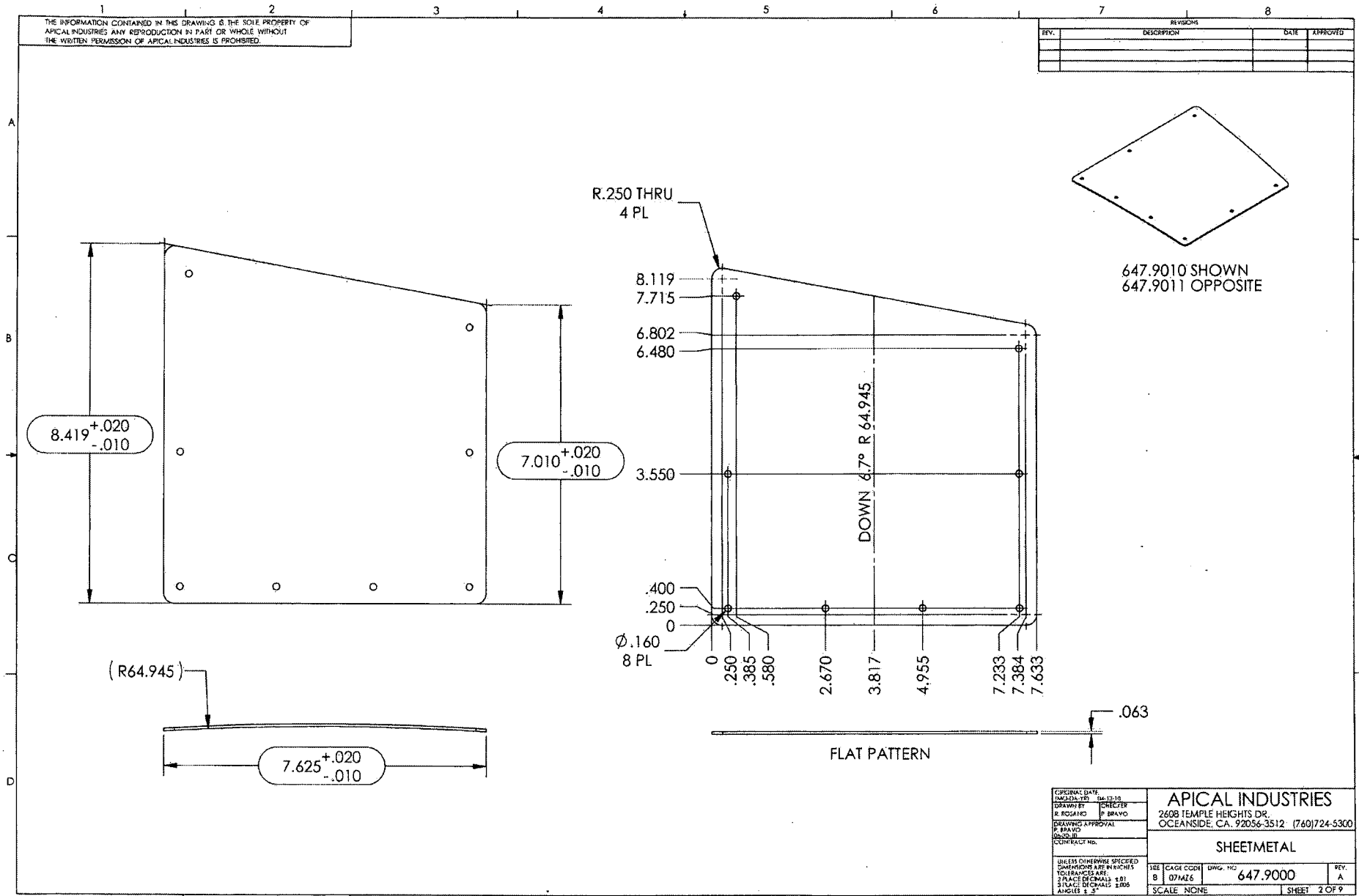


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE RELEASE PP2		
	INITIAL RELEASE	06-30-10	P. BRAVO
A	INCORPORATED FCN 03213, 03216, 03207, 3, 03229	12-01-12	P. BRAVO

		4	12	601.2277	RIVET	COR264SS-302		
		2	11	601.1900	NUT/PLATE	M521059-3		
			10	647.9019	HINGE			△
			9	647.9018	DOUBLER	△		△
		1	8	647.9017	DOUBLER	△		△
			7	647.9016	DOUBLER	△		△
			6	647.9015	DOUBLER	△		△
			5	647.9014	STRUT BRACKET	△		△
			4	647.9013	FWD CLIP	△		△
			3	647.9012	FWD CLIP	△		△
			2	647.9011	DOUBLER	△		△
			1	647.9010	DOUBLER	△		△
		X		647.9001	DOUBLER ASSY	△		△
		9001	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.	
QTY				PARTS LIST				
NEXT ASSY (\$)				APICAL INDUSTRIES				
647.8900				2608 TEMPLE HEIGHTS DR.				
647.9400				OCEANSIDE, CA. 92056-3512 (760)724-5300				
				SHEETMETAL				
ORIGINAL DATE MODIFIED QUANTITY P. ROSANO G. SPANIO DRAWING APPROVAL P. ROSANO DATE 06-30-10 CHECKED BY:				UNIT IS OTHERWISE SPECIFIED UNLESS NOTED ARE PARTS TO STANDARD ARE: 3 RACE DESIGN 1 @ 10 3 RACE DESIGN 1 @ 500 LATCH				
				SIZE CASE CODE DWG. IPT. B 07M16 647.9000 REV. A				
				SCALE NONE 1 SHEET 1 OF 9				

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

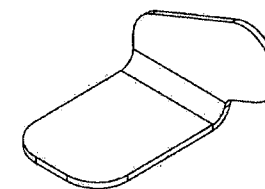
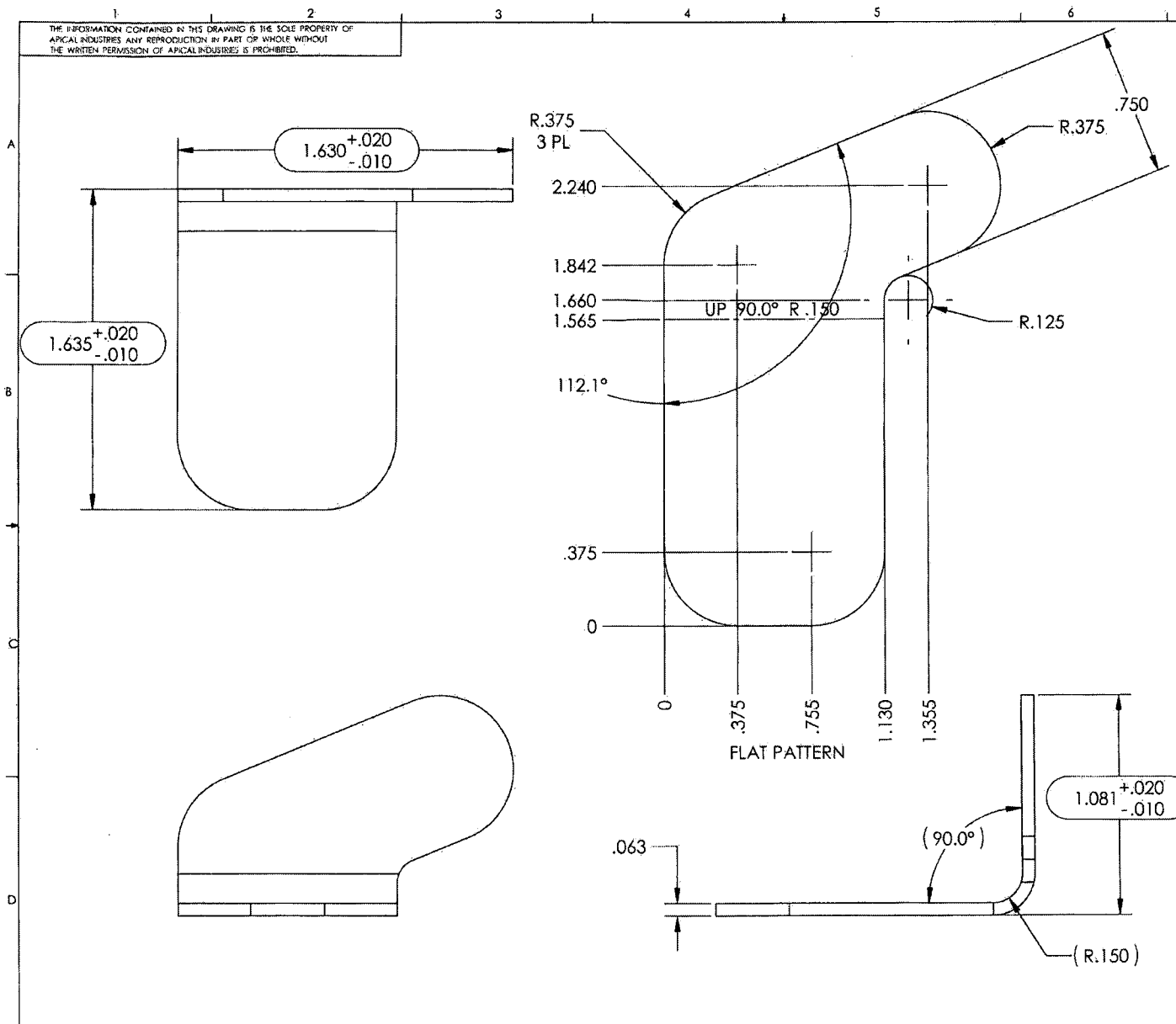


647.9010 SHOWN  
647.9011 OPPOSITE

ORIGINAL DATE 1/24/24-1/25-10		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSARIO	CHECKED BY P. BRAVO	SHEETMETAL	
DRAWING APPROVAL P. BRAVO		SIZE B	SCALE NONE
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS $\pm .01$ 2 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		ENG. NO. 647.9000	REV. A
SHEET 2 OF 9			

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



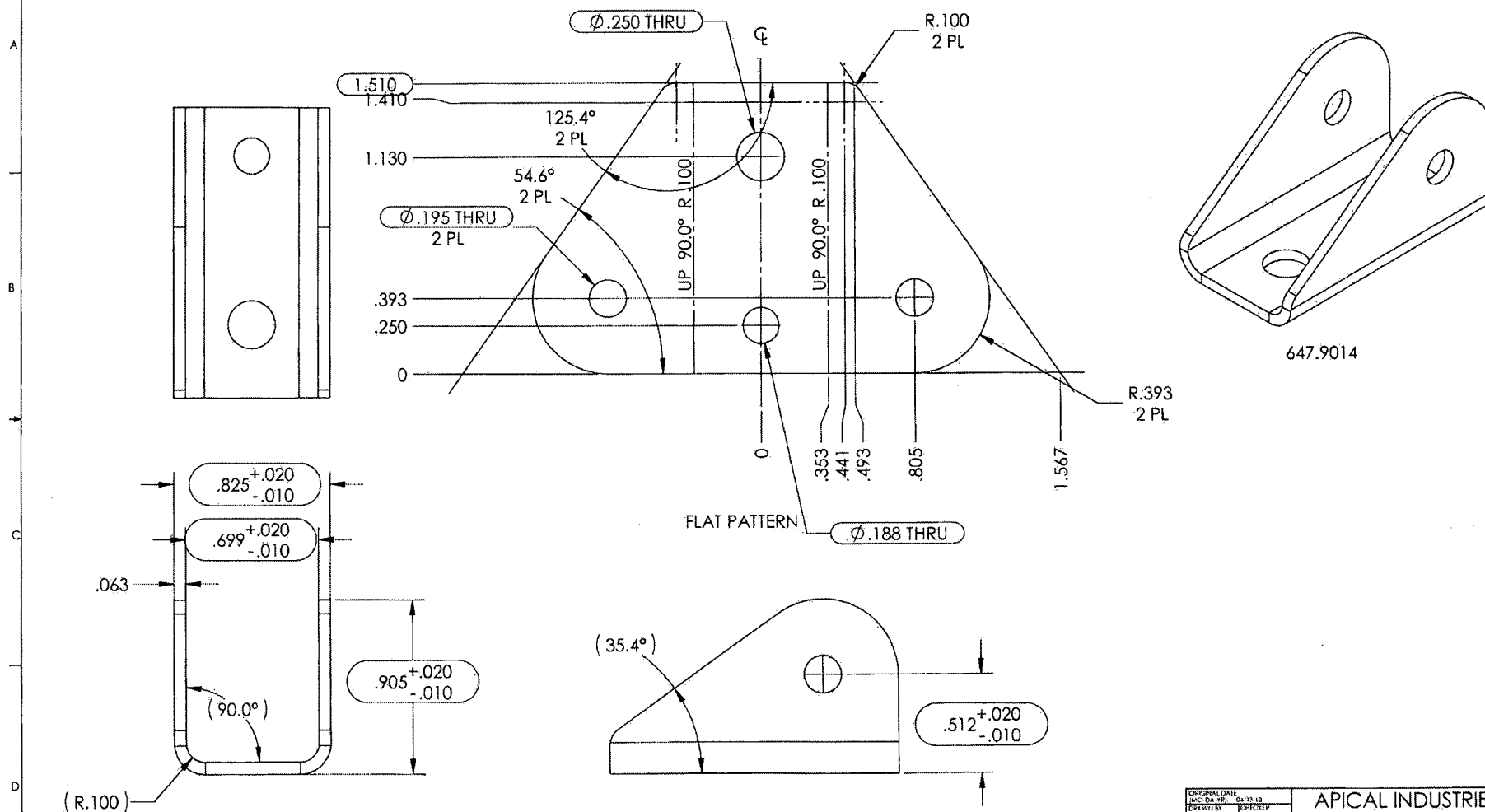
647.9012 SHOWN  
647.9013 OPPOSITE

ORIGINAL DATE REV. DATE 04/13/10		APICAL INDUSTRIES	
DRAWN BY R. POLANO		2608 TEMPLE HEIGHTS DR.	
CHECKED BY P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		SHEETMETAL	
CONTRACT NO.		DWG. NO. 647.9000	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .10 3 PLACE DECIMALS .005 ANGLES .5°		SCALE NONE	REV. A
		SHEET 3 OF 9	



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

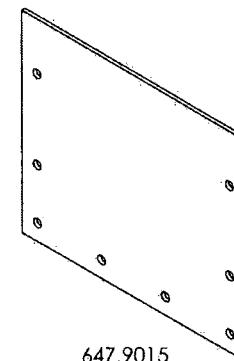
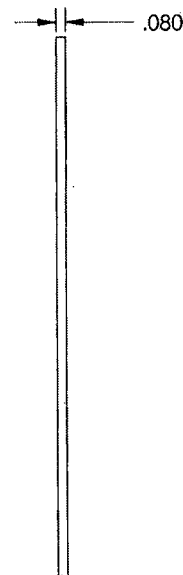
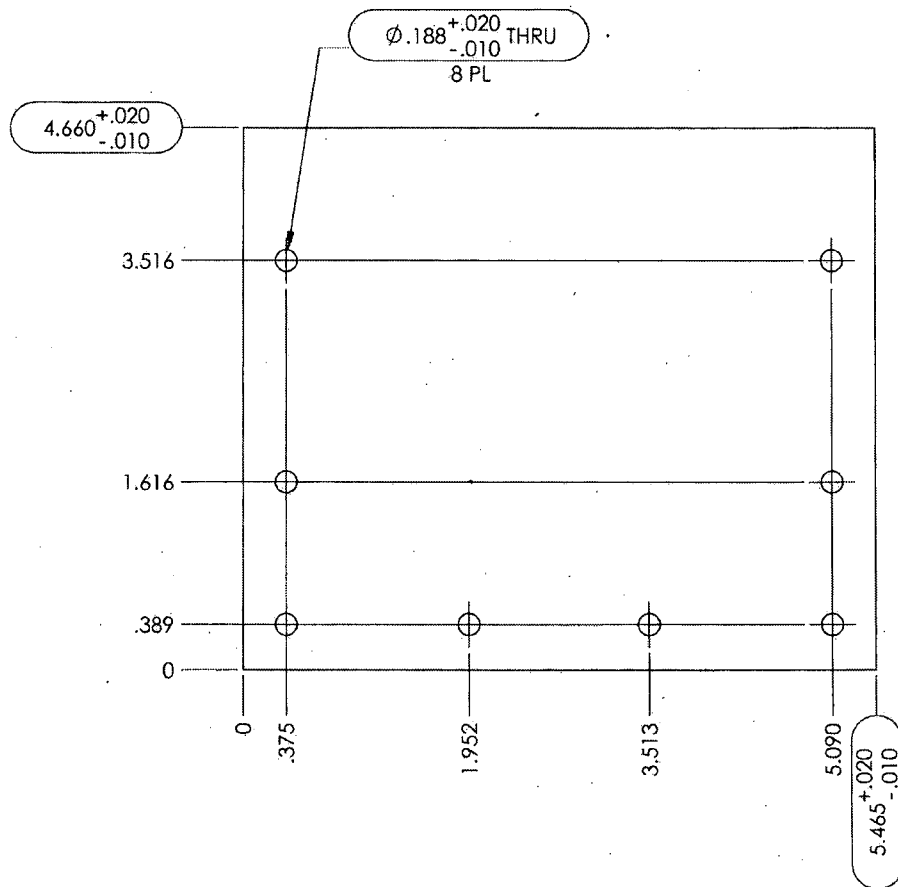


ORIGINAL DATE 04-11-10		APICAL INDUSTRIES	
DRAWN BY P. ROSANO	CHECKED BY P. ROSANO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. ROSANO	CONTRACT NO.	SHEETMETAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± .01 DECIMALS ± .005 ANGLES ± .5°		SHEET B 07M16	DWG. NO. 647.9000
SCALE NONE		REV. A	
		SHEET 4 OF 9	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

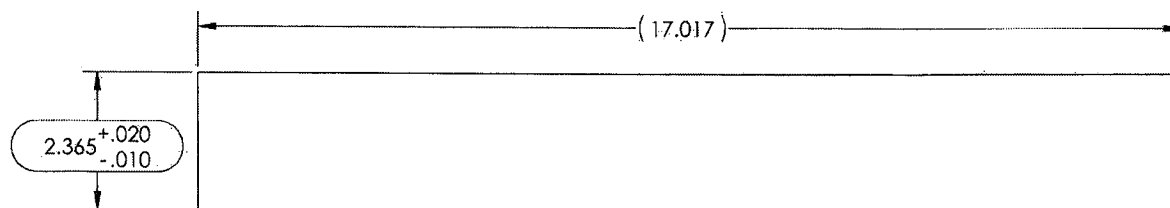
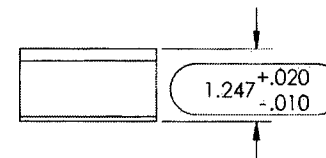
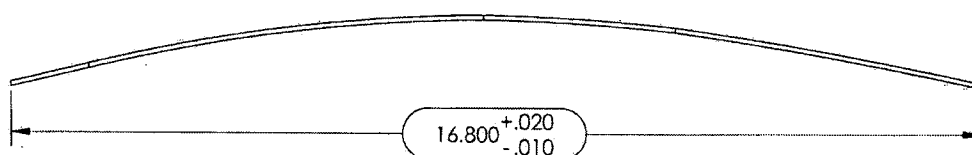
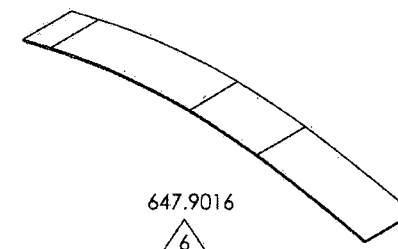
A  
B  
C  
D



ORIGINAL DATE (MM/DD/YY) 04-13-10		APICAL INDUSTRIES	
DRAWN BY R. ROJANO P. BRAVO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL 04-30-10		SHEETMETAL	
CONTRACT NO.		SIZE CASE CODE B D7M26	DWG. NO. 647.9000
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE NONE	REV. A SHEET 3 OF 9

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REV. NO.			
REV.	DESCRIPTION	DATE	APPROVED



FLAT PATTERN

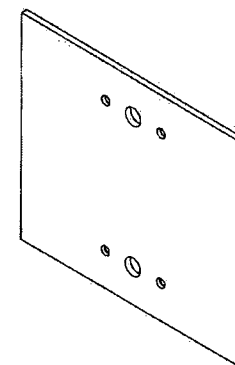
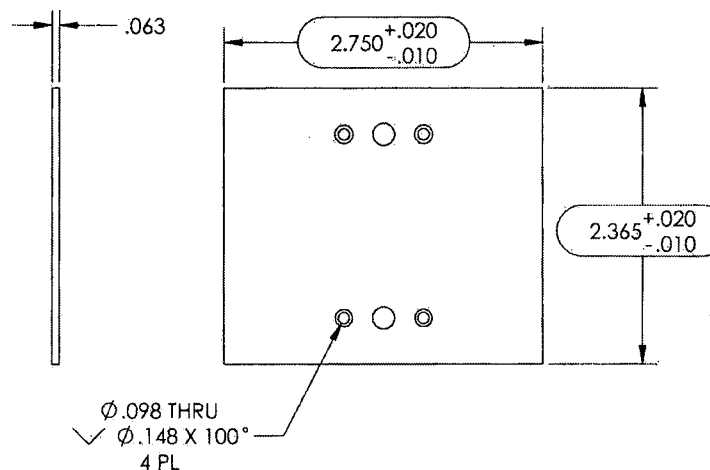
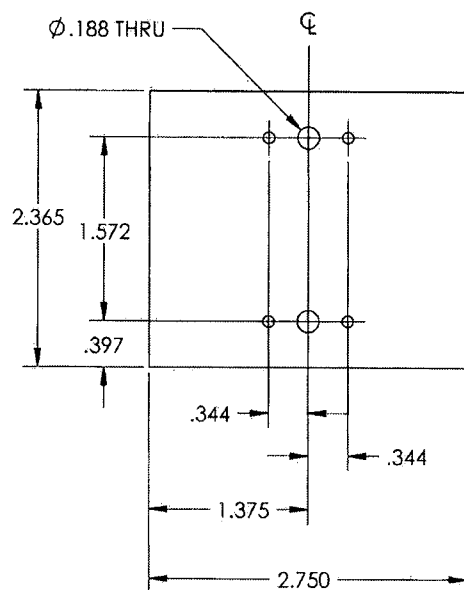
.080

ORIGINAL DATE  
10/13/10  
DRAWN BY  
P. ROMERO  
CHECKED  
P. BRAVO  
DRAWING APPROVAL  
P. BRAVO  
CONTRACT NO.

APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300  
SHEETMETAL  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE  
2 PLACE DECIMALS ±.01  
3 PLACE DECIMALS ±.005  
ANGLES ±.5°  
SHEET 6 OF 9

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

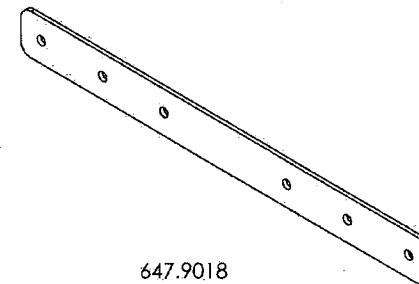


ORIGINAL DATE 1/10/2010 08:15:10		APICAL INDUSTRIES	
DRAWN BY P. EUSAND	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		SHEETMETAL	
CONTRACT NO.		REV. NO. B 07/12/16	REV. A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .001 3 PLACE DECIMALS .0005 ANGLES .5°		SCALE NONE	SHEET 7 OF 9

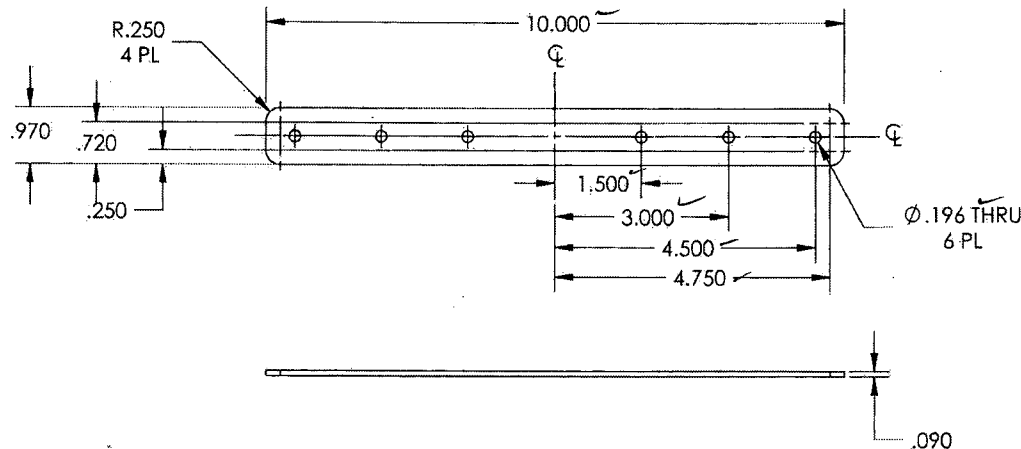
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REVISION			
REV.	DESCRIPTION	DATE	APPROVED

PR2



647.9018



ORIGINAL DATE  
INCHES/MILLIMETERS  
DRAWN BY: J. BOSANO  
CHECKED BY: P. BRAVO  
DRAWING APPROVAL  
P. BRAVO  
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS .001  
3 PLACE DECIMALS .0005  
ANGLES .5°

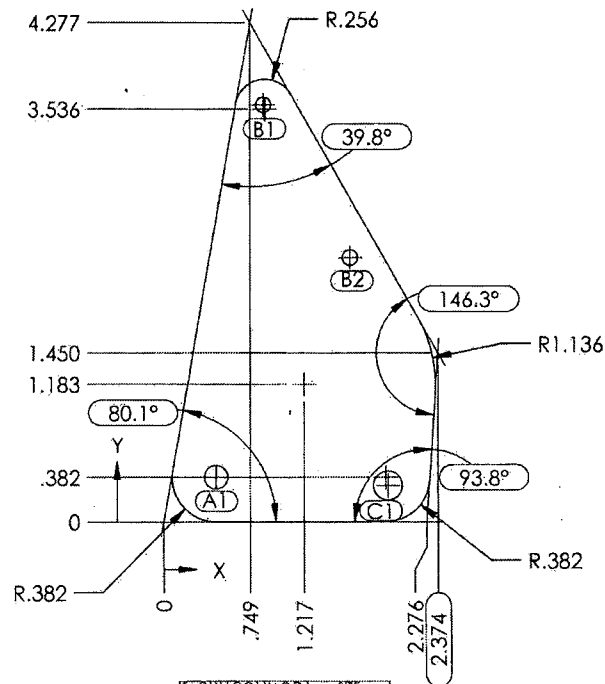
**APICAL INDUSTRIES**  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760) 724-5300

**SHEETMETAL**

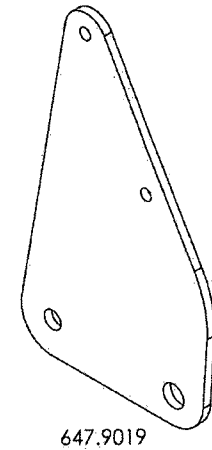
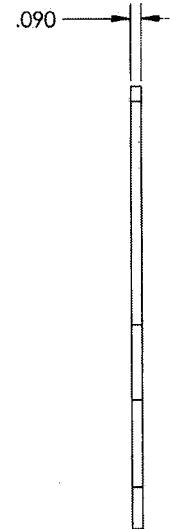
REV. A  
SCALE: NONE  
SHEET 8 OF 9

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



TAG	X LOC	Y LOC	SIZE
A1	.455	.382	Ø.201 THRU
B1	.867	3.573	Ø.130 THRU
B2	1.614	2.266	Ø.130 THRU
C1	1.939	.312	Ø.250 THRU



ORIGINAL DATE 10/20/2011 06:23:10 DRAWN BY: P. BRAND CHECKED: P. BRAND DESIGNED: P. BRAND APPROVED: P. BRAND CONTRACT NO.				APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92036-3512 (760)724-5300			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS .01 2 PLACE DECIMALS .005 ANGLES ± .5°				SHEETMETAL			
DATE	DWG. CODE	DWG. TID	REV.	DATE	DWG. CODE	DWG. TID	REV.
B	07M16	647.9000	A				
SCALE: NONE				SHEET 9 OF 9			



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO25229

Purchase Order Date 7/30/2014

PO Print Date 7/31/2014

Page Number 7 of 8

**Order From :**

VC-ATG001

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 613-446-4544

**Ship To Contact**

**Ship To Phone**

**Ship Via:** VENDOR'S TRUCK

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** CAD

**FOB** FCA - (Free Carrier)

18	120986	647.4410 RAIL	8/15/2014	16.00	\$0.00	\$0.00
----	--------	---------------	-----------	-------	--------	--------

Yes

8/15/2014

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

**Line Total:** \$0.00

19 119417

647.9018 DOUBLER

8/15/2014

44.00 ✓

\$0.00

\$0.00

Yes

8/15/2014

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

**Line Total:** \$0.00

**Note:**

7/31/2014



A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 63206

Date: 15-Aug-14

To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ship To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
4 ea	Part: 646.3310 LH HALF HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2  PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140493 PO: PO25229	Rev:	Line:
10 ea	Part: 646.3312 CENTER PLATE HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2  PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140494 PO: PO25229	Rev:	Line:
20 ea	Part: 647.3911 UPPER DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2  PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140495 PO: PO25229	Rev:	Line:
32 ea	Part: 647.4211 RAIL HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2  PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140498 PO: PO25229	Rev:	Line:
44 ea	Part: 647.9018 DOUBLER HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2  PRIME AS PER MIL-P-23377J TYPE I CLASS N	Rev:	Line: